

Upper Pit River Disadvantaged Communities' Human Right to Water and Drought  
Sustainability Projects  
*North Cal-Neva Resource Conservation and Development Council, Inc.*

**Attachment 6 – Program Preferences**

**Project 1: Grant Administration**

This project addresses the administration of the overall grant application. As such, it does not, in itself, contribute toward programmatic preferences, but does help the other (implementation) projects to meet their stated preferences.

**Project 2: Pit River Streambank Stabilization and Riparian Restoration with Floodplain Enhancement Project**

**A. Program Preferences Met**

*Address statewide priorities:*

*Drought Preparedness: Improve landscape and agricultural irrigation efficiencies*

The Pit River provides approximately 60% (Source: California Water Plan, Regional Reports) of the irrigation water needed for agricultural operations. Not only does the River provide water from the Warner Mountains but is also a conveyance system to transport water from other sources, such as Big Sage Reservoir, to ranching operations along the River. A stream which is in a proper functioning condition is more efficient in delivering water than a functioning-at-risk stream. A properly functioning stream's improved efficiency applies not just in normal flow but also during time of flood or drought. The improvement of the Pit River is a long term effort; however steps that are taken now will help improve stream conditions for the future. This project is taking the first step needed to improve stream function in this reach of the River by reducing streambank erosion to stop the channel widening process along with restoring the riparian corridor.

*Climate Change Response Actions:*

*Proposals that contain projects that when implemented address adaptation to climate change effects in an IRWM region. Desirable proposals include those that: Establish migration corridors, re-establish river-floodplain hydrologic continuity, reintroduce anadromous fish populations to upper watersheds, and enhance and protect upper watershed forests and meadow systems*

With climate change, scientists predict more frequent occurrences in extreme weather events. For the watershed, it means experiencing frequent floods and drought. These events cannot be prevented, but through stream restoration a proper functioning stream has a greater resistance and resilience to deal with extremes. Stabilizing the streambank and restoring the riparian corridor are key functions to restore a proper functioning condition. The streambank stabilization techniques also help stabilize the adjacent meadows. This is accomplished by protecting areas where water re-enters the stream from the adjacent floodplain, whether the source is irrigation or flood.

*Expand Environmental Stewardship*

*Proposals that contain projects that practice, promote, improve, and expand environmental stewardship to protect and enhance the environment by improving watersheds, floodplains, and instream functions, and to sustain water and flood management ecosystems.*

*Promote and practice integrated flood management to provide multiple benefits:*

*Enhanced floodplain ecosystems*

This project is the environmental stewardship process in the Upper Pit River IRWM Plan. This Plan was developed by a diverse group of agencies, interest groups and stakeholders. Projects in the plan implement the goals and objectives developed for this plan which are designed to protect and improve the Pit River Watershed. This project focuses on instream functions and floodplain connectivity. The successful completion of this project helps to promote and expand the concepts of environmental stewardship throughout the watershed. This is accomplished by stakeholder participation in project planning and implementation and outreach efforts by the Watershed Alliance group.

**B. The breadth and magnitude to which the preference(s) will be met.**

The impact on the preferences will be small. The Pit River is a large system with many identified problems. Restoring the Pit River to a proper functioning stream is a large undertaking. Restoring the River will take many more projects like this one to get the job done. However, this is a start on this effort and it will be an enhancement to the other four projects completed on the Warm Springs Valley reach of the Pit River.

### **Project 3: Fall River Resource Conservation District / Pit Resource Conservation District Open Ditch Conversion Water Conservation / Water Supply DAC Projects**

#### Address statewide priorities:

##### *Drought Preparedness: Improve landscape and agricultural irrigation efficiencies*

The entire Upper Pit River community receives water supply from local sources: creeks, rivers and groundwater; this DAC community utilizes *no* imported water. Improving landscape and agricultural irrigation efficiencies is a critical tool for drought preparedness. By taking out 5.5 miles of open ditch conveyance and putting in the proposed 28,600 feet of pipe to convey water, the community will conserve water at an estimated rate of 26%.

The conserved water would become potential additional water supply for downstream users and others using the same watershed for water supply.

The conserved water has the potential to stay in stream, restoring riparian habitat and supporting a more naturalized regional hydrological system as articulated by the local IRWM plan.

Eliminating the open ditch conveyance systems will have immediate measureable impacts on local water quality by removing water from conditions prone to causing low dissolved oxygen, excessive sediment, nitrification and high temperatures. Run-off from water that comes in via pipe will be in better condition when it returns to the larger watershed.

#### Climate Change Response Actions:

*Proposals that contain projects that when implemented address adaptation to climate change effects in an IRWM region. Desirable proposals include those that: Establish migration corridors, re-establish river-floodplain hydrologic continuity, reintroduce anadromous fish populations to upper watersheds, and enhance and protect upper watershed forests and meadow systems*

Climate change adaptation requires anticipating the high probability of profoundly reduced flows in local hydrological systems; by keeping potentially some or all of the 26% water conserved in stream, the proposed project can help to maintain watershed functionality in local creeks and rivers. In addition, providing critical water supply for meadow systems utilized as grazing lands will maintain current wildlife habitat. These meadow systems have, for the last fifty years been composed of a mixture of native plants and grazing grasses and are utilized both by cattle and a wide variety of native species, including endangered sandhill cranes. The Pit River Tailwater project is particularly noteworthy in that the tailwater is pumped back and re-used to keep rice fields wet, creating functional wetlands which are heavily utilized by a wide variety of migrant bird species as this property is part of the Pacific Flyway.

#### Expand Environmental Stewardship:

*Proposals that contain projects that practice, promote, improve, and expand environmental stewardship to protect and enhance the environment by improving watersheds, floodplains, and instream functions, and to sustain water and flood management ecosystems.*

This project practices, promotes, improves and expands environmental stewardship by potentially contributing to instream flow in local creeks and rivers, helping to restore riparian habitat functionality, including at the Pit River which has a 303d listing, along with tributary Hat Creek, which is home for native trout. This project will also maintain historic grazing lands which combine native plants with traditional grazing grass species, creating wildlife habitat within the rangeland. The rice fields watered by the Pit River Tailwater project provide critical wetland habitat for bird species, especially migrant birds which use this property as part of the Pacific Flyway.

### **B. The breadth and magnitude to which the preference(s) will be met.**

Taking out 5.5 miles of open ditch conveyance is an impressive first step in meeting larger regional goals of water conservation. Moving water through 28,600 feet of pipe will improve water quality for the five properties using the water, for downstream users and for the creeks and rivers receiving related run-off. Providing funding for

immediate problem-solving in a DAC community has the potential to inspire community members to address the many identified problems in the Pit River system. Restoring the Pit River to a proper functioning stream is a large undertaking. Restoring the River will take many more projects like this one to get the job done. However, this is a start on this effort and it will be an enhancement to current work done on a large open ditch conversion on a site adjacent to the two Proposed Pit River projects, which was recently completed by NRCS.